

**BEET ARMYWORM PHEROMONE TRAP
CATCHES IN NORTHWEST LOUISIANA
1994 – 1999**

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Abstract

In Northwest Louisiana, the beet armyworm (BAW), *Spodoptera exigua* (Hubner), is a sporadic pest of cotton. To determine if pheromone traps might aid in identifying years the BAW would become a problem, it was decided in 1994 to operate a BAW pheromone trap at the Red River Research Station, Bossier City, LA. With passage in of a boll weevil eradication program in Northwest Louisiana in 1997, it was decided to expand the program from a single trap to a trapline consisting of 8 additional traps extending from near the Arkansas border in northern Caddo Parish to Natchitoches, LA.

The BAW trap operated on the Red River Research Station, Bossier City, LA from 1994 to 1999 and the 8 trapline pheromone traps operated from 1997 to 1999 were all Universal Moth Type funnel traps. BAW pheromone lure was provided by Trece, Inc, Salinas, CA, and pheromone was changed every two weeks and pesticide strips in each trap every four weeks. The BAW trap located on the Red River Research Station was run from late March until early to mid-November each year. The trapline from northern Caddo Parish to Natchitoches, LA was operated from 25 Jul to 30 Oct, 12 Jun to 5 Nov, and 1 Jan to 11 Nov during 1997, 1998, and 1999, respectively.

Pheromone trap catch data from the Red River Research Station for 1994 to 1999 indicated that BAW populations were highest during 1995 and 1998. Weekly trap catches exceeded 1000 moths/week on 31 Aug 1995 and on 10 Sep 1998. Peaks in 1995 and 1998 occurred on 21 Sep (3486 moths) and 1 Oct (1631 moths), respectively. The only other year trap catches exceeded 1000 was 1994, but that did not occur until 6 Oct after cotton maturity and cut-out. The only years weekly trap catches exceeded 100 during July was 1995 (27 Jul - 118 moths) and 1998 (9 Jul - 216 moths). Means were calculated for the 4 traps north of Shreveport and for the four traps south of Shreveport because of the similarities in pheromone trap catches from these two areas. BAW catches exceeded 1000 moths/week only in 1998, and then only for the traps north of Shreveport. During 1998, mean trap catches were approximately 3 times higher north of Shreveport compared to traps south of Shreveport. Mean BAW trap catches did not exceed 100 till 11 Sep, 30 Jul, and

7 Oct in 1997, 1998, and 1999, respectively. Mean BAW trap catches for the traps south of Shreveport did not exceed 100 until 25 Sep, 30 Jul, and 14 Oct in 1997, 1998, and 1999, respectively.

The "Cotton Insect Losses" section of the *Proceeding of the Beltwide Cotton Conferences* presents yearly reports on cotton losses from the various insects pests for each state. The reports on Louisiana losses from 1994 to 1998 indicate that 1995 and 1998 were the years with with the heaviest BAW losses. Yield reduction in 1995 and 1998 was estimated at 0.38% and 0.24%, respectively. Percent yield reduction to the BAW was estimated at less than 0.1% for 1994, 1996, 1997, and 1999. Data from this trial demonstrates that mid-season (July) pheromone trap catches exceeding 100 moths/trap/week indicates that damaging populations of BAW are likely to occur that year in cotton. It is unlikely these same mid-season BAW levels will be applicable in other cotton growing areas, or that mid-season population levels are the only factor determining whether mid-season BAW populations reach treatable levels later in the season.